**ENVIRONMENTAL PROTECTION AGENCY**

**40 CFR Part 52**

**[EPA-R03-OAR-2020-0157; FRL-10023-27-Region 3]**

# Air Plan Approval; Pennsylvania; Allegheny County Area Attainment Plan for the 2012 Fine Particulate Matter National Ambient Air Quality Standard

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Final rule.

**SUMMARY:** The Environmental Protection Agency (EPA) is approving most elements of a state implementation plan (SIP) revision submitted by the Pennsylvania Department of Environmental Protection (PADEP) on behalf of the Allegheny County Health Department (ACHD) to address Clean Air Act (CAA or "the Act") requirements for the 2012 annual fine particulate matter ($PM_{2.5}$) national ambient air quality standards (NAAQS or "standards") in the Allegheny County Moderate $PM_{2.5}$ nonattainment area (the "Allegheny County Area," or "the Area"). The revision constitutes a comprehensive plan to ensure the Allegheny County Area's timely attainment of the 2012 $PM_{2.5}$ NAAQS. EPA is approving this revision to the Pennsylvania SIP in accordance with the requirements of the CAA.

**DATES:** This final rule is effective on **[**INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER**]**.

**ADDRESSES:** EPA has established a docket for this action under Docket ID Number EPA-R03-OAR-2020-0157. All documents in the docket are listed on the https://www.regulations.gov website. Although listed in the index, some information is not publicly available, e.g., confidential business information (CBI) or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available through https://www.regulations.gov, or please contact the person

identified in the **For Further Information Contact** section for additional availability information.

**FOR FURTHER INFORMATION CONTACT:** Brian Rehn, Planning & Implementation Branch (3AD30), Air & Radiation Division, U.S. Environmental Protection Agency, Region III, 1650 Arch Street, Philadelphia, Pennsylvania 19103. The telephone number is (215) 814-2176. Mr. Rehn can also be reached via electronic mail at rehn.brian@epa.gov.

**SUPPLEMENTARY INFORMATION:**

Throughout this document, "we," "us," and "our" refer to EPA.

**Table of Contents**



## I. Background

Epidemiological studies have shown statistically significant correlations between elevated levels of $PM_{2.5}$ (particulate matter with a diameter of 2.5 microns or less) and premature mortality. Other important health effects associated with $PM_{2.5}$ exposure include aggravation of respiratory and cardiovascular disease, changes in lung function, and increased respiratory symptoms. Individuals particularly sensitive to $PM_{2.5}$ exposure include older adults, people with heart and lung disease, and children.[1] $PM_{2.5}$ can be emitted directly into the atmosphere as a solid or liquid particle ("primary $PM_{2.5}$" or "direct $PM_{2.5}$") or can be formed in the atmosphere as

[1] *See* National Ambient Air Quality Standards for Particulate Matter; (2012) Final Rule (78 FR 3086-3088, January 15, 2013).

a result of various chemical reactions among precursor pollutants such as nitrogen oxides ($NO_x$), sulfur oxides, volatile organic compounds, and ammonia ("secondary $PM_{2.5}$").[2]

EPA first established annual and 24-hour NAAQS for $PM_{2.5}$ on July 18, 1997.[3] The annual standard was set at 15.0 micrograms per cubic meter (μg/m$^3$), based on a 3-year average of annual mean $PM_{2.5}$ concentrations, and the 24-hour (daily) standard was set at 65 μg/m$^3$, based on the 3-year average of the annual 98th percentile values of 24-hour $PM_{2.5}$ concentrations at each monitor within an area.[4] On October 17, 2006, EPA revised the level of the 24-hour $PM_{2.5}$ NAAQS to 35 μg/m$^3$, based on a 3-year average of the annual 98th percentile values of 24-hour concentrations.[5] On January 15, 2013, EPA revised the annual standard to 12.0 μg/m$^3$, based on a 3-year average of annual mean $PM_{2.5}$ concentrations.[6] We refer to this standard as the 2012 $PM_{2.5}$ NAAQS. The SIP submission at issue in this action pertains to the 2012 $PM_{2.5}$ NAAQS.

## II. Summary of SIP Revision and EPA Proposed Action

EPA designated and classified the Allegheny County Area as "Moderate" nonattainment for the 2012 $PM_{2.5}$ NAAQS.[7] On September 30, 2019, PADEP submitted the Allegheny County $PM_{2.5}$ Plan SIP revision, on behalf of ACHD, in order to meet the applicable requirements for Moderate areas and to provide for attainment of the 2012 $PM_{2.5}$ NAAQS in the Allegheny County Area. The SIP revision contains the attainment demonstration for the Allegheny County Area (also referred to as "the Allegheny County $PM_{2.5}$ Plan" or "the Plan"). On June 12, 2020 (85 FR 35852), EPA proposed to fully approve the following elements of the Allegheny County $PM_{2.5}$ Plan: The base year emissions inventory, the particulate matter precursor contribution

---

[2] *See* Clean Air Fine Particle Implementation Rule; Final Rule (72 FR 20586, 20589, April 25, 2007).

[3] *See* National Ambient Air Quality Standards for Particulate Matter (1997); Final Rule (62 FR 38652, July 18,1997). The initial NAAQS for $PM_{2.5}$ included annual standards of 15.0 μg/m$^3$, based on a 3-year average of annual mean $PM_{2.5}$ concentrations and 24-hour (daily) standards of 65 μg/m3, based on a 3-year average of 98th percentile 24-hour concentrations (40 CFR 50.7).

[4] The primary and secondary standards were set at the same level for both the 24-hour and the annual $PM_{2.5}$ standards.

[5] *See* National Ambient Air Quality Standards for Particulate Matter; Final Rule (71 FR 61144, October 17, 2006).

[6] *See* National Ambient Air Quality Standards for Particulate Matter; Final Rule (78 FR 3086, January 15, 2013).

[7] *See* Air Quality Designations for the 2012 Primary Annual Fine Particle ($PM_{2.5}$) National Ambient Air Quality Standards (NAAQS); Final Rule (80 FR 2206, January 15, 2015).

demonstration, the reasonably available control measures/reasonably available control technology (RACM/RACT) element, the air quality modeling demonstration supporting attainment by the attainment deadline, the reasonable further progress (RFP) analysis, and the quantitative milestones to ensure timely attainment.[8]

Having identified deficiencies (and having obtained a commitment to remedy those deficiencies within one year of final action), EPA proposed a conditional approval of the contingency measures and the 2021 motor vehicle emission budget (MVEB) element of the Allegheny County $PM_{2.5}$ Plan. Pennsylvania committed (via an April 20, 2020 letter to EPA) to submit a supplemental SIP revision to remedy those two elements of the Plan by no later than twelve months after EPA's final conditional approval action.

As part of our June 12, 2020 proposal, we proposed to find that the suite of $PM_{2.5}$ control requirements in the Allegheny County $PM_{2.5}$ Plan meets all RACM/RACT requirements for the control of direct $PM_{2.5}$ and PM precursors and to approve the $PM_{2.5}$ RACM evaluation as meeting the applicable nonattainment area plan requirements under CAA sections 172(c)(1) and 189(a)(1)(C) and 40 CFR 51.1009.

EPA also proposed to find that the attainment demonstration in the Allegheny County $PM_{2.5}$ Plan satisfies the requirements of sections 189(a)(1)(B) and 172(c)(1) of the CAA and 40 CFR 51.1011(a). In support of this proposal, we found that the ACHD relied upon acceptable modeling techniques to demonstrate attainment of the 2012 $PM_{2.5}$ NAAQS in the Allegheny County Area, and that the Plan demonstrates attainment of the 2012 $PM_{2.5}$ NAAQS as expeditiously as practicable. We determined that the Allegheny County $PM_{2.5}$ Plan provides a convincing justification that emission reductions from the control measures listed in the Plan will provide for timely attainment of the 2012 $PM_{2.5}$ NAAQS by the December 31, 2021 attainment date. Our June 12, 2020 proposed rule provides a more detailed discussion of our evaluation of

[8] *See* Allegheny County Area Attainment Plan for the 2012 Fine Particulate Matter National Ambient Air Quality Standard; Proposed Rulemaking (85 FR 35852, June 12, 2020).

the Plan.[9]

Other specific requirements applicable to attainment plans under the 2012 $PM_{2.5}$ NAAQS and the rationale for EPA's proposed action are explained in the June 12, 2020 proposed rule, and its associated technical support documents (TSDs), and will not be restated here.

**III. Public Comments and EPA Responses**

The June 12, 2020 proposed action to approve the Allegheny County $PM_{2.5}$ Plan opened a public comment period, which ended on July 13, 2020. Following a request for additional time from a public advocacy group, EPA published a document on July 31, 2020 reopening and extending the public comment period through August 13, 2020.[10] EPA received public comments from several environmental groups and several individual commenters. The comments received have been placed in the docket for this action. EPA's summary of the significant adverse comments received on the proposed action and our responses to those comments are listed below.

*Comment 1:* The commenter requests that EPA consider the lateness of ACHD submission of the Plan (nearly three years after the due date) when assessing the "credibility" of ACHD's attainment demonstration. The commenter contends that ACHD's stated reason for being late (i.e., the complexity of the plan analysis) is inadequate justification for the lateness. The commenter states that if ACHD had not submitted a plan to EPA before the 18-month sanctions clock deadline, the Allegheny $PM_{2.5}$ nonattainment area would have been subject to sanctions, including a more stringent emissions offset ratio requirement applicable to new and modified major stationary sources. The commenter posits that the delay in submitting this Plan provides "context" for flaws in the submitted plan.

*Response 1:* Although the Commonwealth submitted the Allegheny County Plan well after the October 15, 2016 CAA statutory deadline, EPA disagrees with the commenter's

[9] *Id.*
[10] *See* 85 FR 46046, July 31, 2020.

assertion that this delay in submission must be presumed to result in a flawed Plan. Lateness of the Plan in and of itself does not interfere with the ability of ACHD to prepare an attainment plan meeting the CAA and related EPA regulatory requirements. Section 110(k) requires EPA to evaluate and to act upon SIP submissions from states. EPA has authority to approve, disapprove, or conditionally approve a SIP submission, in whole or in part, based upon whether the submission meets all applicable requirements. Lateness of a state's submission of the Plan to EPA does not affect EPA's obligation to evaluate and act upon the SIP submission based on its merits, consistent with those requirements. As explained in the proposed action, EPA has determined that the SIP submission from ACHD does meet most of the applicable requirements as submitted. However, EPA is herein requiring that Pennsylvania meet these applicable requirements when addressing the conditional approval of the contingency measures' requirement.

Regarding the sanctions process mentioned by the commenter, EPA's finding of failure to submit deficiency was remedied by EPA's November 1, 2019 letter determining that PADEP's September 30, 2019 SIP submittal of the Plan was complete.[11] At that point, sanctions under section 179 of the CAA for failing to submit the required nonattainment plan ceased to be applicable. If Pennsylvania fails to remedy the identified conditions of the conditional approval, converting those elements of the Plan to a disapproval, then that disapproval would constitute a new finding under the terms of CAA section 179(a), beginning a new 18-month period prior to potential application of sanctions described by CAA section 179(b). EPA's conversion of the proposed conditional approval into a final conditional approval by this action will prevent the further imposition of CAA section 179(b) sanctions unless Pennsylvania does not submit the required elements of the Plan by the deadline under the final conditional approval, i.e., one year from the date of EPA's final conditional approval.

*Comment 2:* The commenter states that EPA should require more rigorous analyses from

[11] *See* Document EPA-R03-OAR-2020-0157-0045 in the docket for this action at www.regulations.gov.

ACHD for the Plan since it contains air quality modeling tailored to attaining the NAAQS of 12.0 μg/m$^3$ precisely, with no margin of safety. The commenter cites EPA's 2018 "Guidance for Attainment Demonstrations for $PM_{2.5}$," which states that "supplemental evidence should accompany all model attainment demonstrations"[12] and that "generally, those modeling analyses that show that attainment will be reached in the future with some margin of safety will need more limited supporting material,"[13] and goes on to state that "for other attainment cases in which the projected future design value is closer to the NAAQS, more rigorous supporting analyses should be completed."[14] The commenter points out that ACHD's modeling projects attainment at exactly the level of the NAAQS (i.e., 12.0 μg/m$^3$) and the commenter thus believes EPA should adhere to its guidance by compelling ACHD to provide more rigorous analyses to support its attainment demonstration.[15]

The commenter questions the credibility of ACHD's Plan, given public statements by ACHD that it is prohibited from developing a control strategy for NAAQS attainment that reduces emissions to levels that would result in air quality that is better than the level required for purposes of the 2012 $PM_{2.5}$ NAAQS. The commenter argues that ACHD's contention in the Plan that they are prevented by state/local law from adopting a control strategy that exceeds Federal requirements (i.e., that provides emission reductions resulting in an attainment year design value below the 12.0 μg/m3 standard) is not supported by state or local law.

*Response 2:* EPA acknowledges that its guidance recommends that modeling demonstrations projecting $PM_{2.5}$ design value concentrations that are close to the level of NAAQS (as is the case for the Liberty Monitor at issue in the Plan) should have more supporting evidence and analyses. EPA's November 2018 Ozone, $PM_{2.5}$ and Regional Haze guidance directs that supplemental

---

[12] *See* EPA, Modeling Guidance for Demonstrating Air Quality Goals for Ozone, $PM_{2.5}$ and Regional Haze (November 29, 2018), p. 169, available in the online docket for this action at www.regulations.gov, Document ID EPA-R03-OAR-2020-1057-0068.

[13] *Id*

[14] *Id*

[15] *See* ACHD September 30, 2019 SIP revision Main Document, (Table 5-5, Base and Future Design Values (μg/m$^3$), Liberty), p. 36. Available at www.regulations.gov, Document ID EPA-R03-OAR-2020-1057.

evidence should accompany all model attainment demonstrations and that, generally, those modeling analyses that show that attainment will be reached in the future with some margin of safety will need more limited supporting material. However, for other attainment cases in which the projected future design value is closer to the NAAQS, more rigorous supporting analyses should be completed.[16]

Based on information provided in the weight of evidence (WOE) analysis submitted as part of the Allegheny County $PM_{2.5}$ Plan, including information from the electric grid operator for the area (PJM Interconnection, LLC), EPA has concluded that Allegheny County has performed a "more rigorous supporting analyses" in support of its modeling analysis demonstration that meets EPA's guidance. The Plan projects that all monitors in the Allegheny County $PM_{2.5}$ nonattainment area will comply with the 2012 $PM_{2.5}$ NAAQS by the required 2021 attainment date.[17] The commenter did not mention the Plan's WOE analysis or PJM data in its comment, so it is not clear if the commenter was aware of their existence. Allegheny County's WOE analysis shows declining $PM_{2.5}$ monitor concentrations, additional source emission reductions not included in the modeling analysis, precursor sulfur dioxide ($SO_2$) reductions imposed in Allegheny County's 1-hour $SO_2$ SIP, reductions in emissions due to electric generating unit (EGU) shutdowns within the PJM Interconnection territory, a comparison of model $SO_2/NO_x$ EGU emissions showing potential excess precursor emissions in the projected year model inventory (see Appendix K of ACHD's SIP submittal) which could lead to a model overprediction bias, overall emission reductions due to declining local population trends, and additional emission reductions associated with several local control measures. These represent additional analyses that would not be necessary if the modeling projected attainment at a design value below 12.0 $\mu g/m^3$. Also, the commenter does not elaborate on why ACHD's analysis is inadequate, other than to assert that it should be more rigorous. Finally, the commenter did not

[16] *See* EPA's November 2018 Ozone, $PM_{2.5}$ and Regional Haze guidance, p. 169.
[17] *See* Appendix M of ACHD's September 12, 2019 SIP revision, comments 69 and 70.

provide any additional analyses or evidence supporting its assertion that Allegheny County's SIP will not provide for attainment of the $PM_{2.5}$ NAAQS by the statutory attainment date (see response to comment 4 regarding current $PM_{2.5}$ design values in Allegheny County). In the absence of any contrary evidence, upon EPA's review of the SIP submission including the modeling and additional evidence supporting the predicted attainment by the attainment date, EPA concludes that ACHD's Plan will bring the area into attainment.

The commenter asserts that there is no legal prohibition at the state or county level preventing the state or county from requiring a greater level of emission reductions of direct $PM_{2.5}$ or $PM_{2.5}$ precursors that would allow the Area to model attainment at a design value below 12.0 $\mu g/m^3$. However, the existence or nonexistence of such a prohibition is not germane to the task at hand, which is determining whether the submitted Plan will result in attainment of the 2012 $PM_{2.5}$ NAAQS in Allegheny County by the attainment date. In this case, the attainment modeling projecting that the design value for this Area will meet the NAAQS limit by the attainment date is sufficient to demonstrate that the $PM_{2.5}$ NAAQS will be met, in accordance with CAA requirements.

*Comment 3:* The commenter claims that EPA's 2018 guidance does not allow the use of a Local Area Analysis (LAA) in order to disregard a modeled future (i.e., attainment year) design value that is higher than the NAAQS. The commenter asserts this is not reasonable because the purpose of the attainment demonstration analysis is to facilitate a control strategy, rather than as a substitute for a forecast of nonattainment. The commenter states that after calculating a future design value of 12.6 $\mu g/m^3$ at the Liberty monitor using CAMx modeling, ACHD rejected the result and instead conducted a supplemental LAA, the results of which ACHD instead used to demonstrate that the attainment year design value test was met.

The commenter notes that ACHD acknowledges that the CAMx model, which is EPA's recommended model for $PM_{2.5}$, can address local impacts as well as regional impacts by selecting certain available options within the CAMx model. The commenter also alleges that

despite the fact that the CAMx modeling addressed local impacts, ACHD ignored those CAMx-derived local impacts in favor of a separate LAA that used AERMOD to determine those local impacts, which were then fed back into the CAMx model.[18] The commenter argues that this approach is not consistent with EPA's $PM_{2.5}$ attainment demonstration guidance. Further, the commenter states that the purpose of a LAA is not to engineer a design value that will just meet the NAAQS, but rather to supplement the results of the attainment test.

The commenter asserts that EPA's 2018 Guidance cites the relative attainment tests described in sections 4.2, 4.4.2 and 4.5 of the guidance as the primary modeling tools used in an attainment demonstration, and that use of a chemical transport grid model on a regional or local scale is the best tool available to judge the impacts of changes in future year emissions on concentrations. The commenter further argues that "while the Agency contemplates other models, the purpose is only to 'supplement' the results of the modeled attainment test."[19] The commenter notes that when EPA's guidance indicates that while use of such models "may be useful as a supplemental analysis…" it is speaking to the control strategy rather than to the attainment demonstration itself.

The commenter argues that EPA's guidance does not state that a supplemental dispersion model could be the basis for the actual attainment test, which is the result reached by ACHD. The commenter disagrees (both from a policy and a legal perspective) with ACHD's rationale, which seeks to characterize the sources contributing to levels of fine particulates at the Liberty Monitor, based on statements in ACHD's modeling demonstration that "Source characterization with CAMx was likely not fully representative of some sources near Liberty, specifically for some processes at the USS Clairton Plant," and that "Refined modeling with AERMOD can more accurately account for many processes with the use of different source types…" The commenter argues that a question regarding relative contribution among sources is separate from

[18] *Id.* See section 5.4.1 [Liberty LAA Methodology], p. 33.
[19] *Id*. Pp. 171-172.

a question regarding the reliability of modeling results obtained through the use of CAMx.

The commenter argues that ACHD's other rationales for use of a LAA are also invalid, surmising that if CAMx were conservative with its EGU assumptions, that would not make the CAMx modeling flawed.[20] Similarly, the commenter argues that if "some local primary $PM_{2.5}$ emissions were overestimated with the inventory used for the CAMx modeling," that would not be a justification for abandoning the CAMx model.[21] The commenter further argues that suggestions that the spatial grading in the CAMx model is "likely too large to properly simulate localized impacts at Liberty" or that "species are not being properly apportioned by the modeled results" are also not justifiable.[22]

The commenter argues that while EPA guidance contemplates that $PM_{2.5}$ measurement data from monitors may not be representative of "area-wide" air quality and therefore not suitable for comparison with the standard, this statement is limited to "micro-scale" and "middle-scale" sites.[23] The commenter contends that by preparing a LAA with "supplemental" modeling and then using this to replace the "primary" modeling analysis, ACHD has made a determination that the Liberty Monitor data is unsuitable for comparison with the NAAQS – a determination that is contradicted by the fact that the Liberty Monitor is a core $PM_{2.5}$ site (characterized in the monitoring plan as a "neighborhood" site) that is used to determine compliance with NAAQS.[24]

The commenter argues that these supporting arguments prevent use of an alternative LAA to ignore the projected 2021 Liberty 12.5 $\mu g/m^3$ CAMx modeled design value from the primary analysis in lieu of the lower 12.0 $\mu g/m^3$ design value provided by ACHD's LAA.

*Response 3:* The Community Air Quality Model with Extensions[25] or CAMx, with a

---

[20] *Id.*
[21] *Id.*
[22] *Id.*
[23] *See* EPA "Modeling Guidance for Demonstrating Air Quality Goals for Ozone, $PM_{2.5}$ and Regional Haze," p. 133, which states, "$PM_{2.5}$ measurement data from monitors that are not representative of "area-wide" air quality, but rather of relatively unique micro-scale, or localized hot spot, or unique middle-scale impact sites, are not eligible for comparison to the annual $PM_{2.5}$ NAAQS."
[24] *See* ACHD 2020 Air Monitoring Network Plan, page 33, Section 10.2.
[25] CAMx is a state-of-the-science photochemical grid model that comprises a "one-atmosphere" treatment of tropospheric air pollution over spatial scales ranging from neighborhoods to continents. *See* the CAMx webpage, at: www.camx.com/about/default.aspx.

1.33-kilometer (km) grid, projected 2021 model results are summarized in Table 5-4 of Allegheny County's main SIP document. Projected 2021 $PM_{2.5}$ design value concentrations for all Allegheny County monitors except for the Liberty Monitor, which was not included in the table, are below the 24-hr and annual $PM_{2.5}$ NAAQS. Results from EPA's Model Attainment Test Software (MATS, version 2.6.1) for all of the Allegheny County monitors are listed in Appendix I.1 of Allegheny County's SIP document. Projected 2021 $PM_{2.5}$ concentrations are included in Table 3.6 of Appendix I.1 (for annual $PM_{2.5}$ NAAQS) and Table 3.7 of Appendix I.1 (for the 24-hour $PM_{2.5}$ NAAQS). Liberty's CAMx projected 2021 annual $PM_{2.5}$ design value is 12.5 $\mu g/m^3$ and its projected 24-hour $PM_{2.5}$ design value is 38.6 $\mu g/m^3$, which exceed both the Annual and 24-hour $PM_{2.5}$ NAAQS.

Allegheny County's SIP document outlines several reasons why it believes CAMx has overstated projected 2021 $PM_{2.5}$ design values at the Liberty Monitor (see page 32 of the main SIP document). These points include over-projections of future $SO_2$ and $NO_x$ in the EGU sector (see EPA's TSD regarding PJM Interconnection, LLC EGU fuel usage and projected year emission differences within the 4-km CAMx domain for additional support on this point), overestimated local primary $PM_{2.5}$ emissions, too coarse spatial resolution of CAMx domain (1.33 km) used in the projected 2021 $PM_{2.5}$ concentrations, and CAMx's uniform treatment of all emissions as emanating from stack point sources when a significant number of sources at some of the larger US Steel plants are better represented as (fugitive) volume or area source types. Additional discussion of these points can be found in Appendix I.2 and Appendix F.3 of the Allegheny County Plan SIP.

The commenter offers several points to counter Pennsylvania's LAA, but EPA's guidance clearly allows an option to utilize a Gaussian type air-dispersion model (such as AERMOD) to model the primary components of $PM_{2.5}$ (organic carbon (OC), elemental carbon (EC) and other primary $PM_{2.5}$ (OPP)) and to exclude chemically reactive components of $PM_{2.5}$ such as sulfate and nitrate. Per EPA's "Modeling Guidance for Demonstrating Air Quality

Goals for Ozone, $PM_{2.5}$ and Regional Haze," dated November 29, 2018, states that, "local influences creating large spatial gradients are likely to consist mostly of primary $PM_{2.5}$ (OC, EC, and OPP). These sources may be point sources, or they may be nearby roads or other mobile or area sources."[26]

$PM_{2.5}$ monitor concentrations in Allegheny County show there is a significant concentration (spatial) gradient near the Liberty Monitor site (see Allegheny County monitor's current 2017-19 $PM_{2.5}$ design value maps contained in the attached technical support document). Liberty's current design values are 16-29% higher on the annual basis and 34-48% higher on the 24-hour basis than the two nearest $PM_{2.5}$ monitors (Clairton and North Braddock). Furthermore, Liberty's $PM_{2.5}$ speciation breakdown from CAMx shows it has substantially higher values in its OC, EC and OPP components than the other monitors in Allegheny County (see Tables 3.6 and 3.7 in Appendix I.1). Documentation of high OC, EC and OPP is needed to justify using the Gaussian (AERMOD) dispersion model.

EPA's guidance directs that a grid model can be run at very high horizontal resolution (1 or 2 km or finer) or a Gaussian dispersion model can be used.[27] Grid-based models simulate chemical transformation and complex meteorological conditions, while dispersion models are generally more simplistic; being limited to a local-scale, using Gaussian approximations with little or no chemistry. Therefore, while dispersion models may not be an appropriate tool for determining secondary $PM_{2.5}$ or ozone concentrations, they work well for use in determining local primary $PM_{2.5}$ impacts.

The commenter asserts that the Allegheny County Area $PM_{2.5}$ plan's modeling demonstration "abandons" the (1.33 km) CAMx demonstration results. This significantly mischaracterizes ACHD's $PM_{2.5}$ SIP modeling demonstration. Allegheny County indicated that it was using the LAA for the Liberty Monitor to remodel the primary (nonreactive) $PM_{2.5}$

---

[26] *See* section 4.6.1 of EPA's "Modeling Guidance for Demonstrating Air Quality Goals for Ozone, $PM_{2.5}$ and Regional Haze," November 29, 2018.
[27] *Id.* Section 4.6.1.

components of its modeling demonstration, while retaining the chemically reactive $PM_{2.5}$ species from CAMx. In essence, it is removing only the nonreactive portion of $PM_{2.5}$ generated by CAMx, in accordance with EPA guidance, and replacing values from the nonreactive chemical CAMx species with results from a Gaussian dispersion model (AERMOD). This AERMOD modeling was performed using the same meteorological Weather Research and Forecasting (WRF) model data set via EPA's Mesoscale Model Interface Program (MMIF) that was used in the CAMx modeling.

Allegheny County further justified developing and using its LAA based on improved model spatial resolution and source characterizations available via this pathway. The CAMx model, while relative fine-scaled (approximately 1.33 km grid spacing), is still coarse when considering some of the large primary $PM_{2.5}$ emission sources in Allegheny County. In essence, all emissions are inserted into CAMx at a horizontal scale of approximately 1.33 km and within specified vertical layers within CAMx. The CAMx model distributes emissions across the entire grid box in which they are emitted, and because of this artificial dilution the distribution of these emissions in CAMx may be represented in the model as artificially high outside of the source plume and artificially low within the source plume. Such artificial dilution is not problematic for regional scale air quality modeling purposes, but can impact local scale modeling of plumes, as is the case here. ACHD pursued plume-in-grid and AERMOD dispersion modeling to better resolve the emission sources' plume transport and dispersion that were not well resolved with the base CAMx modeling. To alleviate this issue, Allegheny County's CAMx modeling system utilized a plume in grid parameterization that withholds a portion of emissions from being directly released across the entire model grid cell; without plume in grid, CAMx would instantaneously disperse source emissions across a full grid when in reality the plume will spread more slowly from its release point.

Spatial resolution for a Gaussian dispersion model such as AERMOD is not limited in scale; and AERMOD can resolve emissions and processes more finely than the CAMx model.

Additionally, AERMOD has multiple source characterizations available while CAMx can only model stack-like point source releases. CAMx treats fugitive emissions using a point source parameterization that does not resolve the emissions in sufficient detail to properly characterize the impacts of important $PM_{2.5}$ sources such as fugitive releases from the US Steel sources in this nonattainment area modeling demonstration. Near the Liberty Monitor, there are prominent fugitive emission sources that include coke oven emissions (oven leaks, pushing, charging, quenching and material handling). AERMOD can more finely resolve these fugitive emissions to ensure better placement of these emissions into the modeling domain, resulting in a better prediction of source impacts in the local area near the source and a better estimate of the projected DV. Allegheny County's SIP followed EPA guidance in the development, running and processing of its LAA.

For these reasons, EPA believes Allegheny County is justified in conducting a LAA using a Gaussian dispersion model (AERMOD) to more accurately project the Liberty Monitor's 2021 $PM_{2.5}$ design values. Furthermore, Allegheny County has fully documented that it has followed EPA's guidance in executing its LAA.

*Comment 4:* The commenter asserts that ACHD's 2021 modeling projection is flawed and unreasonable because the selected 2011 base year is unrepresentative of current and potential future meteorological conditions for the area. The commenter contends that the area experienced an unusually low number of atmospheric inversions and higher than normal annual precipitation in 2011. Given the importance of meteorological inputs in modeling, the commenter believes the 2011 meteorological data will result in lower modeled $PM_{2.5}$ concentrations for 2021 than modeling using another year's meteorological data. As evidence that 2011 is unrepresentative of current and future meteorological conditions, the commenter cites ACHD's meteorological analysis, which states, "more recent years have recorded above normal average temperatures along with precipitation amounts substantially above normal; therefore, the 2011 base year may well represent these more current conditions." The commenter contends that while ACHD used

the Weather Research and Forecasting (WRF) meteorological model for the Allegheny County domain, stating that is has been determined to produce appropriate representative meteorological conditions to provide meteorological inputs for the air quality modeling, they also cautioned that the accuracy of the modeling is dependent upon the "representativeness of the meteorological dataset."

The commenter argues that 2011 had a lower than average number of temperature inversions (134 days versus an average of 157 days with inversions from 2008 to 2018), and that the location where temperature inversions are measured (the Pittsburgh International Airport) will have not only fewer temperature inversions in a year than the low-lying valleys that make up most of the nonattainment area, but also that the strength of the inversions will be greater in the valleys. The commenter argues that 2012 meteorological data would be more representative because it had only one more temperature inversion than the average from 2008 to 2018. The commenter argues that with respect to precipitation, the selected 2011 base year is not representative because Allegheny County experienced 44.24 inches of precipitation that year, which is more than six inches greater than the NWS 30-year mean for the period 1981-2010[28] and was over four-and-one-half inches greater than the average between 1991-2019. The commenter contends that ACHD's choice of 2011 precipitation data is a statistical outlier, exceeded only five years in the most recent thirty. The commenter contends that ACHD is appealing to climate change as a basis for use of unrepresentative meteorological conditions in modeling future year emissions, contrary to EPA guidance.[29] Finally, the commenter contends that ACHD did not follow EPA's guidance by using meteorological inputs for modeling that are conducive to elevated $PM_{2.5}$ concentrations.[30]

---

[28] *See* National Weather Service, *Pittsburgh Historical Precipitation Totals 1836 to Current*, at: www.weather.gov/media/pbz/records/hisprec.pdf .

[29] *See* 2019 Modeling Guidance for Demonstrating Air Quality Goals for Ozone, $PM_{2.5}$ and Regional Haze, Section 2.6.2 (Assessing Impacts of Future Year Meteorology), page 32, at www.regulations.gov: Document ID EPA-R03-OAR-2020-0157-0068.

[30] *See* U.S. EPA, Modeling Guidance for Demonstrating Air Quality Goals for Ozone, $PM_{2.5}$ and Regional Haze, Section 2.3.1 (Choosing Time Periods to Model), page 20.

*Response 4:* Multiple factors are considered in selecting a base year for modeling purposes. ACHD considered meteorology, source emissions data, and monitoring data, and ultimately selected 2011, due to the availability of the 2011 National Emissions Inventory (NEI) as well as the availability of reasonably representative monitoring and meteorological data. In some cases, choice of available actual data eases the burden of adjusting or altering the data to represent other possible base years (e.g., the availability of 2011 NEI year data lends itself to selection of a 2011 base year without adjustment). Allegheny County provided an overview of its base year selection in several sections of its SIP documentation, namely its Problem Statement (Section 2) of the SIP and the CAMx Model Protocol (Appendix F.2). Estimates of the effects of climate change over the short time periods and small spatial scales (i.e., for the purpose of attainment of the $PM_{2.5}$ NAAQS by the attainment deadline) would be too uncertain to add value.

EPA reviewed Clean Air Council's climatological information for Pittsburgh International Airport (temperature and precipitation) and inversion strength information generated by the Allegheny County Health Department (ventilation rate). A more detailed analysis of Pittsburgh International Airport's 30-year temperature and precipitation as well as Allegheny County's inversion strength summary is included as a separate TSD. EPA will summarize its findings in the next several paragraphs.

EPA analyzed daily temperature and precipitation information collected at the Pittsburgh International Airport weather station over a 30-year period between 1990 to 2019, listed at the Pennsylvania State Climatological website.[31] EPA focused our review on the 2011 base year and the other years that are used to reconstruct the base year design values. All years that include 2011 in the Allegheny County monitoring design values, and that were used in the model attainment test, were considered (i.e., the periods 2009-11, 2010-12 and 2011-13). While monthly and annual average temperatures and total precipitation values for 2011 do sometimes

[31] *See* www.climate.met.psu.edu/data/ida/ for select FAA daily summaries.

vary from the 30-year averages, they generally fall within 1 standard deviation of the mean. This means that while temperatures and precipitation totals may differ from their 30-year means, the differences in precipitation and temperature would not be considered statistically significant outliers in the normal distribution (for example several standard deviations from the 30-year means). Additionally, the commenter has not established that there is a strong correlation between the meteorological conditions (i.e., temperature and precipitation values) at the Pittsburgh International Airport's weather station and the projected $PM_{2.5}$ design values for Allegheny County monitors, especially the Liberty Monitor.

EPA also reviewed and updated the inversion strength information that is developed by the Allegheny County Health Department as part of its assessment of daily dispersion characteristics.[32] Allegheny County has identified a correlation with inversions and elevated $PM_{2.5}$ concentrations within the county and has included it in several sections of its SIP documentation (problem statement section of the main SIP and more thoroughly discussed in Appendices B and F). EPA's review of Allegheny County's most recent 2019 annual inversion summary report, available on Allegheny County's website, shows that the 2011 model base year has an unusually low number of days without significant inversions and the number of inversion days in 2011 lies outside 1 standard deviation of the 2008-19 average. EPA's analysis also shows the Liberty Monitor's annual quarterly means and 98$^{th}$ percentile 24-hour $PM_{2.5}$ concentrations do appear to correlate well with Allegheny County's inversion day totals; $PM_{2.5}$ concentrations, both 24-hour and annual, are higher during years with more inversion days. EPA therefore finds merit with the commenter's point that Allegheny County's base year 2011 is unrepresentative of the yearly number of inversions because it has a significantly lower number of inversion days, which could lead the modeling to skew lower in its $PM_{2.5}$ concentrations.

While we acknowledge the commenter's concern that Allegheny County's 2011

[32] *See* ACHD's monitoring data webpage, at: www.alleghenycounty.us/Health-Department/Programs/Air-Quality/Monitored-Data.aspx, under "Air Dispersion Reports."

meteorological data has a lower number of inversion days than other years, EPA disagrees with the commenter's assertion that Allegheny County's selection of 2011 as its base year will lead to projected 2021 $PM_{2.5}$ design values that are lower than would otherwise be projected using other years of meteorological data. The selection of a base year with fewer than usual number of inversion days will be mostly muted by how the modeled attainment test is constructed. This is because the $PM_{2.5}$ model demonstration uses modeling in a "relative" sense and not in an absolute sense.[33] That is, the predicted model $PM_{2.5}$ concentration for the projected year simulation is not directly used for attainment determination purposes, and instead is used to develop species-by-species $PM_{2.5}$ relative reduction factors that are applied to a weighted base year design value (for each individual component of $PM_{2.5}$). The influence of meteorology on model $PM_{2.5}$ concentrations is dampened because projections are done using ratios of concentrations based on the same meteorology; the base-year and projection-year meteorology are identical. Furthermore, the weighted design value concept that EPA's guidance utilizes generates a base year (2011) monitor design value that is taken from multiple years of monitoring data. This partially offsets the impacts of selecting one or more years with favorable meteorology that may contribute to lower modeled concentrations.

Furthermore, the commenter's assertion that the selection of a year with an unrepresentative number of inversions (2011) as Allegheny County's base year would lead to an under-estimation of future monitor design values, and therefore attainment, does not hold up when Allegheny County's final projected 2021 design values are compared to the most recent (2017-19) monitor design values. If anything, Allegheny County's modeling results are over-predicting based on current design values.[34] EPA used the modeled base year and future year design values for all of the Allegheny County monitors to calculate linear annual and 24-hour

[33] *See* Section 4.1 of EPA's *Modeling Guidance for Demonstrating Air Quality Goals for Ozone, $PM_{2.5}$ and Regional Haze*, November 29, 2018 for additional discussion on the Model Attainment Test.

[34] EPA's analysis of modeled and monitored design values in Allegheny County is more fully explained in its TSD included as part of this response.

$PM_{2.5}$ trend lines, then applied the model calculated change in $PM_{2.5}$ concentration per year to generate a projected 2019 design value concentration.[35] Further information on EPA's calculation of the projected 2019 design value calculation is available in the TSD prepared for this action. These values could then be compared with the actual monitor values to see how well Allegheny County's modeling demonstration could reproduce actual monitor design values. In nearly every case, the model projected design values that were higher than the actual monitor design values, suggesting that the model projections are conservative with respect to actual monitor $PM_{2.5}$ design values. The most recent design values pulled from EPA's Air Quality System (AQS) indicate that only annual $PM_{2.5}$ design values at the Liberty monitor exceed the NAAQS; Liberty's 2017-19 annual design value is 12.4 $\mu g/m^3$.

Based on Allegheny County's modeled yearly emission change (-0.24 $\mu g/m^3$ per year), EPA expects Liberty will achieve the $PM_{2.5}$ NAAQS by its projected attainment date of 2021. All other $PM_{2.5}$ monitors inside Allegheny County currently meet the 2012 $PM_{2.5}$ NAAQS, two years before the statutory attainment date. Allegheny County also included an unmonitored area analysis (Appendix I.3) to confirm the $PM_{2.5}$ NAAQS will be met across the entire (county) nonattainment area.

To summarize, EPA agrees with the commenter's point that the selected 2011 base year for the $PM_{2.5}$ modeling demonstration has a lower than typical number of inversion days, but this fact does not undermine Allegheny County's attainment demonstration, because the model is being used in a relative sense and not an absolute sense. Lower modeled $PM_{2.5}$ generation due to meteorology in the base year (fewer inversions) would likely lead to lower modeled relative reduction factors (that are applied to a multi-year-weighted base year design value). Furthermore, Allegheny County's projected $PM_{2.5}$ concentrations appear to be overpredicting

[35] *See* EPA's Supplemental TSD, "Providing Responses to Comments Regarding the EPA's Proposed Approval of the Attainment Demonstration for the Allegheny County $PM_{2.5}$ Nonattainment Area, under the 2012 National Ambient Air Quality Standard," prepared October 2020.

current $PM_{2.5}$ design values (2017-19). All current $PM_{2.5}$ design values in Allegheny County meet the 2012 $PM_{2.5}$ NAAQS except for the annual $PM_{2.5}$ design value at Liberty. Using the Liberty Monitor's projected modeled $PM_{2.5}$ reduction rate, this monitor is projected to attain the NAAQS by the area's December 31, 2021 statutory attainment date. The CAMx modeling projects that all other monitors in the area will attain by the 2021 attainment deadline.

*Comment 5:* The commenter argues that instead of disregarding the CAMx modeled attainment year projected design value of 12.5 $\mu g/m^3$ at the Liberty Monitor, ACHD should have focused on strengthening the emission control strategy for U.S. Steel facilities in the Allegheny County $PM_{2.5}$ nonattainment area. Instead, the commenter alleges that during its process to propose the attainment demonstration, ACHD claimed that it is not appropriate to require companies to make emissions reductions in the context of preparing attainment demonstrations. The commenter argues that section 110(a)(2) of the CAA directs states to "include enforceable emission limitations and other control measures, or techniques… as may be necessary or appropriate to meet the applicable requirements of this chapter." The commenter contends that federal rules, specifically 40 CFR 51.1009(a)(1), require a state to "identify, adopt, and implement control measures, including control technologies, on sources of direct $PM_{2.5}$ emissions and sources of emissions of $PM_{2.5}$ plan precursors," in the attainment plan control strategy and that 40 CFR 51.1009(a)(2) requires the state to "identify all potential control measures to reduce emissions from all sources of direct $PM_{2.5}$ emissions and all sources of emissions of $PM_{2.5}$ plan precursors in the nonattainment area."

In developing a control strategy to model attainment of the $PM_{2.5}$ NAAQS, the commenter argues that ACHD should seek emission reductions from the largest sources of fine particulates, which are the three U.S. Steel facilities that are responsible for over half of all point source $PM_{2.5}$ emissions in the nonattainment area.[36] Given the proximity of these facilities to the

[36] *See* ACHD's September 30, 2019 SIP revision, Appendix D.1, pp. 10-11 (Table D-2) (identifying base year emissions of 588.725 tons pr year (tpy), 633.215 tpy, and 71.936 tpy from three U.S. Steel facilities, which

Liberty Monitor in the Mon Valley, which has typically been the violating monitor in the area for the $PM_{2.5}$ NAAQS, the commenter argues that the $PM_{2.5}$ plan control strategy does not adequately focus on reducing emissions contributions to the Liberty Monitor from the three U.S. Steel facilities in the Mon Valley. The commenter states that there is no change in the annual $PM_{2.5}$ emissions at the Edgar Thomson facility in Braddock (633.215 tpy) or the Irvin facility in West Mifflin (71.936 tpy), while the Clairton Coke Works will see a small reduction of 34.63 tpy between the 2011 base year and the 2021 attainment year inventory - a decrease of only about six percent over ten years.[37] The commenter points out that most of the emission reductions achieved at the Clairton Coke Works stem from two coking quench tower replacements (approximately 117.2 tpy) -- with little progress in reducing emissions (less than one tpy) from coal handling or other coke manufacturing operations at that facility. The commenter notes that upgrades to Battery C (including tower replacement) resulted in a net increase in emission of 82.3 tpy – with the new Tower C for C Battery being installed in 2012, however, the emission reductions from the shutdown of the old towers it replaced occurred prior to the 2011 base year and are therefore not creditable as a control strategy in the $PM_{2.5}$ plan. The control strategy, including reductions at the Clairton Coke Works, for the $PM_{2.5}$ plan period of 2011 to 2021 results in a reduction of 35.1 tpy.

The commenter suggests that over six years have passed since the last significant emissions reduction measures were enacted at the U.S. Steel facilities and that additional reductions should be enacted as part of the attainment demonstration. The commenter suggests, among other things, that Clairton undertake projects to reduce emissions from leaking doors, lids, and offtakes from coke oven batteries, pursuant to the EPA National Emission Standards for Hazardous Air Pollutants (NESHAP) for charging, leaks, and bypass stacks at coke oven

---

comprise more than half the total emissions of 2,503 tpy from all point sources. Also, pp. 14-15 (Table D-3) (identifying future year emissions of 554.094 tpy, 633.215 tpy, and 71.936 tpy from the three facilities, which exceed half the total emissions of 2,256 tpy from all point sources).

[37] *See* ACHD's September 30, 2019 SIP Revision, Appendix D.1, pp. 10, 14. The Clairton Coke Works emissions were 588.7 tpy in the 2011 base year inventory and 554.1 tpy in the 2021 projected inventory.

batteries.[38]

*Response 5:* As explained in EPA's response to Comment 3, ACHD did not "disregard" any modeling results. EPA believes Allegheny County is justified in conducting a LAA using a Gaussian dispersion model (AERMOD) to develop more accurately the Liberty Monitor projected 2021 $PM_{2.5}$ design values. Furthermore, Allegheny County has fully documented that it has followed EPA's guidance in executing its LAA.

In a moderate area plan, a state is only obligated to adopt measures adequate to demonstrate attainment of the NAAQS. As explained in EPA's PM Implementation Rule, if a moderate area's attainment demonstration shows attainment by the attainment date ". . . without implementing all reasonably available control measures (i.e. RACM/RACT and additional reasonable measures), the state would not be required to adopt certain otherwise reasonable measures if the state demonstrates that collectively such measures would not enable the area to attain the standard at least 1 year earlier (i.e., 'advance the attainment date' by one year). The EPA has long applied this particular test to satisfy the statutory provision related to an area demonstrating attainment 'as expeditiously as practicable.' The EPA continues to believe that this approach provides an appropriate degree of flexibility to a state to tailor the control strategy in the Plan to the actual attainment needs of a particular $PM_{2.5}$ nonattainment area." [39]

ACHD's modeling projects attainment by the attainment date. The RACM analysis indicated that no measures would advance the attainment by 1 year. Therefore, additional controls at Clairton Coke Works or any other facility in the Area are not required to demonstrate attainment.

*Comment 6:* EPA should require that ACHD better substantiate its RACT evaluation for the U.S. Steel facilities in the Allegheny County Area, in light of more recent innovations in emission control technology. The commenter states that ACHD asserts that there are no feasible

[38] *See* 40 CFR part 63, subpart L - National Emission Standards for Coke Oven Batteries.
[39] *See* 81 FR 58010, 58035 (August 24, 2016).

controls (or combination thereof) in the Area that would advance the attainment date by one year or more, and that already implemented controls represent reasonably available (or better) control technology. The commenter believes that ACHD has not substantiated the assertion that further reductions are not reasonably available from the three Mon Valley U.S. Steel facilities, which are collectively projected to emit 1,294 tpy of $PM_{2.5}$ in 2021 (588.7 tpy from Clairton Coke Works, 633 tpy from Edgar Thomson, and 71.9 tpy from Irwin).

The commenter provides multiple examples of sources at the U.S. Steel facilities where emissions could be reduced, for example reduction of fugitive emissions through improved coke oven door sealing measures at the Clairton Coke Works. The commenter also suggests that ACHD should have considered potential RACT controls involving enclosure of emission sources, where feasible, to fully or partially capture emissions, citing examples of this control in use in Japan.[40] The commenter also cites other additional resources for RACT comparison, including European Union Best Available Techniques for the iron and steel industry[41] and the website of the Institute for Industrial Productivity, which provides a list of coke manufacturing emission control innovations.[42]

*Response 6:* The RACT requirements under subparts 1 and 4 of the CAA are focused on measures needed to attain the NAAQS. A state is not required to impose all potential emission control measures if existing measures are sufficient for the area to attain by the attainment date. EPA's PM Implementation Rule and EPA's General Preamble provide that: (i) RACT has

---

[40] *See* Clean Air Council Comment letter dated August 13, 2020, Attachment 8 - - Okazaki et al., Program for Sustainable Development at Nippon Steel, Nippon Steel Technical Report No. 101 (November 2012), at: www.nipponsteel.com/en/tech/report/nsc/pdf/NSTR101-30_tech_review-5-1.pdf.

[41] *See* Clean Air Council comment letter dated August 13, 2020, Attachment 10 -- JRC Reference Report, Best Available Techniques (BAT) Reference Document for Iron and Steel Production (2013), at: https://ec.europa.eu/jrc/en/publication/reference-reports/best-available- techniques-bat-reference-documentforiron-and-steel-productionindustrial-emissions. Specifically, sections relating to Coke Oven Plants (Chapter 5, pages 205-287), Blast Furnaces (Chapter 6, pages 289-352), and Basic Oxygen Steelmaking and Casting (Chapter 7, pages 353-418). *Id*. Refer also to emerging technologies for Coke Ovens (Section 11.3, pages 549-553), Blast Furnaces Section 11.4, pages 554), and BOF and Casting (Section 11.5, pages 555-558).

[42] See Attachment 11 --The Institute for Industrial Productivity, Industrial Efficiency Technology Database, http://ietd.iipnetwork.org/content/coke-making (coke making); see also Attachment 12 -- The Institute for Industrial Productivity, Industrial Efficiency Technology Database, http://ietd.iipnetwork.org/content/coke-dry-quenching (coke dry quenching).

historically been defined as 'the lowest emission limit that a source is capable of meeting by the application of control technology that is reasonably available considering technological and economic feasibility'; (ii) RACT generally applies to stationary sources, both stack and fugitive emissions; (iii) major stationary sources (i.e., sources with potential to emit 100 tons per year or more of direct $PM_{2.5}$ or any $PM_{2.5}$ precursor) should be the minimum starting point for a state's RACT analysis, but states are recommended to evaluate RACT for smaller stationary sources as needed for attainment and considering the feasibility of controls; and (iv) it is possible that a state could demonstrate that an existing source in an area should not be subject to a control technology especially where such technology is unreasonable in light of the area's attainment needs, or such technology is infeasible. In such a case, it could be concluded that no control technology is 'reasonably available,' and RACT for the source could be considered to be no additional control. Thus, the RACT requirement under CAA subpart 4 is primarily focused on stationary sources and forms of emissions control that are technology based.[43]

EPA's $PM_{2.5}$ Implementation Rule requires that all moderate area plans contain RACM, which is defined in 40 CFR 51.1000 as any technologically and economically feasible measure that can be implemented within 4 years of designation of a $PM_{2.5}$ nonattainment area and that achieves permanent and enforceable reductions in emissions of $PM_{2.5}$ and/or $PM_{2.5}$ precursor emissions. RACM includes RACT. As stated in the preamble to the Implementation Rule, EPA recommends that the state should follow a process by which it first identifies all sources of emissions of direct $PM_{2.5}$ and $PM_{2.5}$ precursors in the nonattainment area, and all potential control measures to reduce emissions from those source categories. The state next determines if any of the identified potential control measures are not technologically feasible or economically feasible. The Preamble to the Implementation Rule also states that "measures that are not

[43] *See* 81 FR 58010, 58034. *See* also "General Preamble for the Implementation of Title I of the Clean Air Act Amendments of 1990," 57 FR 13498 (April 16, 1992). *See* also ''State Implementation Plans for Serious PM– 10 Nonattainment Areas: Addendum to the General Preamble for the Implementation of Title I of the Clean Air Act (CAA) Amendments,'' 59 FR 41998 (August 16, 1994).

necessary for attainment need not be considered as RACM/RACT." In the preamble to the $PM_{2.5}$ Implementation Rule, EPA notes that this has been "EPA's longstanding interpretation of RACM/RACT in CAA sections 172(c)(1) and 189(a)(1)(C), which were enacted as part of the amendments to the Act in 1990. Even prior to the 1990 amendments, EPA interpreted the statutory term RACM to encompass only those measures 'necessary to assure reasonable further progress and attainment by the required date.'"[44] In the 1990 amendments to the Act, Congress enacted a "general savings clause," which states that "each regulation, standard, rule, notice, order and guidance promulgated or issued by [EPA] under this chapter, as in effect [before the 1990 Amendments], shall remain in effect according to its terms."[45] Since the passage of the 1990 amendments, EPA's interpretation of RACM and RACT encompasses only those measures necessary to advance attainment has been upheld in multiple U.S. Circuit Courts of Appeals. *See NRDC v. EPA*, 571 F.3d 1245, 1251–1253 (D.C. Cir. 2009); *Sierra Club v. EPA*, 314 F.3d 735, 743– 744 (5th Cir. 2002); *Sierra Club v. EPA*, 294 F.3d 155, 162 (D.C. Cir. 2002). But cf. *Sierra Club v. EPA*, 793 F.3d 656 (6th Cir. 2015) (holding that an area must have subpart 1 RACM/RACT approved into its SIP prior to redesignation, regardless of whether the area is attaining the NAAQS).

In Appendix J of the Allegheny County $PM_{2.5}$ Plan, ACHD explains the methodology it used for its RACT analysis. ACHD explains that the first step was to identify "all current major stationary point sources" in the nonattainment area. ACHD included major sources for $PM_{2.5}$, $SO_2$, or NOx. The second step was to identify the different processes (or process groups) for the applicable major source facilities, and then identify current controls in place for the processes. After the sources and processes (or process groups) were identified, ACHD identified potential RACT alternatives for the processes.

---

[44] *Id,* at footnote 71, citing 44 FR 20375 (April 4, 1979); see 40 CFR 51.1(o) (1972) (defining RACT in similar terms); 42 U.S.C. 7502(b)(2) (1988) (requiring RACM in the precursor to current CAA section 172(c)(1)).
[45] *See* 42 U.S.C. 7415

As stated in Appendix J of the Plan for examination of reasonable alternative controls, ACHD used several EPA resources, including the RACT/BACT/LAER[46] Clearinghouse (RBLC),[47] the Menu of Control Measures (MCM) for NAAQS Implementation,[48] and the Control Cost Manual.[49] ACHD also examined determinations from the RBLC over the past 10 years (from January 1, 2009 through July 1, 2019) for comparison to existing controls. ACHD based its economic analysis of alternatives on estimates of total costs (capital costs plus operating/indirect costs) and/or cost effectiveness (ratio of cost per ton of pollutant). Reasonable controls considered by ACHD included operation and work practices and/or permitted limits for some processes. ACHD concluded in its RACM/RACT analysis that other reasonable control measures it considered but decided not to implement would not advance the attainment date by one year. EPA believes that ACHD's use of the RBLC, the MCM, and the Control Cost Manual comprises a reasonably thorough approach for evaluating potential RACT control options for sources in this area. Furthermore, the modeling demonstration in ACHD's Plan shows attainment by the target attainment date with the control measures set forth in the control strategy. EPA agrees with ACHD's conclusion that those measures that were identified and evaluated under this analysis but that were not adopted and implemented in the area would collectively not advance the attainment date by more than a year. Therefore, EPA agrees that ACHD did not need to adopt and impose additional controls in the area to meet the RACT requirement.

*Comment 7:* The commenter supports EPA's determination that two measures submitted by ACHD as contingency measures do not meet statutory requirements for such measures. However, the commenter objects to EPA's proposal to approve these two measures instead as

---

[46] BACT = Best Available Control Technology; LAER = Lowest Achievable Emission Rate

[47] *See* EPA's RACT/BACT/LAER Clearinghouse webpage, at https://cfpub.epa.gov/RBLC/index.cfm?action=Home.Home&lang=en

[48] *See* EPA's Menu of Control Measures for NAAQS Implementation webpage, at: https://www.epa.gov/air-quality-implementation-plans/menu-control-measures-naaqs-implementation

[49] EPA Air Pollution Control Cost Manual, 6th Edition: https://www.epa.gov/economic-and-cost-analysis-air-pollution-regulations/cost-analysis-modelstools-air-pollution.

"additional control measures."[50] The two measures at issue are: (1) newly installed air curtains and/or covers on the Battery B Shed at the US Steel Clairton Coke Works; and (2) a new combustion (underfire) stack for Battery 15 at the US Steel Clairton Coke Works. In particular, the commenter objects to the approval of the taller combustion stack not only as a contingency measure, but as a control measure appropriate for inclusion in the SIP for the Allegheny $PM_{2.5}$ Plan.

The commenter argues that the higher stack is not a "control measure" at all because control measures must reduce emissions, rather than merely disperse the emissions. Commenter cites 40 CFR §51.1014(b)(1) ("The contingency measures *shall consist of control measures* that are *not otherwise included in the control strategy* or that *achieve emissions reductions not otherwise relied upon in the control strategy for the area* …." (emphasis added by commenter)) and 40 CFR 51.100(n) ("Control strategy means *a combination of measures designated to achieve the aggregate reduction of emissions* necessary for attainment and maintenance of national standards ….") for the proposition that a higher stack which merely disperses the emissions.

*Response 7:* EPA has reevaluated its proposal to approve the two measures at the US Steel Clairton Plant coke works as "additional measures" in light of the commenter's objections, and following further review, it is clear that these measures are discussed in the Plan solely in the context of the contingency measure element of the Plan to address CAA section 172(c)(9). As such, EPA's proposed approval of these two proposed contingency measures as "additional measures" went beyond ACHD's proposal and therefore should not have been considered by EPA as anything other than proposed contingency measures.

Additional review of ACHD's SIP revision shows that the attainment plan does not rely on any potential emission reductions from these two projects in order to show attainment, and modeling supporting the Plan used neither the future increased stack height of the underfire air

[50] *See* EPA's Proposed Rulemaking, at 85 FR 35871 (col. 3), June 12, 2020.

stack of battery 15 nor the cover/air curtains on the south side of Battery B shed in the analysis, as mention of these two measures was limited to the contingency measure section of the Plan. Thus, EPA's decision to not approve these as "additional measures" has no impact on the modeled attainment demonstrations showing that the other measures in the control strategy will result in attainment by the attainment date.

The Plan does not rely on the emission reductions from the two measures as part of the control strategy in the modeled attainment demonstration for the Allegheny $PM_{2.5}$ nonattainment area, but rather as early implemented contingency measures to be implemented under a settlement order between US Steel and ACHD.[51] EPA reiterates our rejection of these two measures as contingency measures as they are both required by a settlement order and are being implemented regardless of whether triggered as a contingency measure.

*Comment 8:* The commenter also asserts that ACHD's future contingency measures must obtain 34 tons per year of emissions reductions, which is the amount representing one year of areawide reductions necessary under the reasonable further progress (RFP) element of the Plan, in order to comply with long-standing policy of the EPA.[52] The commenter believes that ACHD's alternative proposal to adopt contingency measure obtaining reductions in emissions near the Liberty Monitor of only 9.4 tons per year is not in accordance with EPA guidance for contingency measures and that ACHD has not sufficiently "shown its work" to justify why contingency measures representing less than one year of RFP reduction for the Area is needed. Commenter asserts that ACHD's stated rationale that additional modeling shows that the proposed lower level (9.4 tpy) of contingency measures would lead to a reduction in absolute annual modeled impacts of 0.10 μg/m³ at the Liberty Monitor – a level sufficient to model attainment at that monitor in 2022 (if all other emissions are held constant at 2021 levels) - is an inadequate justification for this departure from EPA's guidance.

---

[51] Settlement Agreement and Order #190604, between U.S. Steel and ACHD, June 27, 2019.

[52] 81 FR 58010 and 58068, column 2. *See also* General Preamble for the Implementation of Title I of the Clean Air Act Amendments of 1990 (August 16, 1992), 57 FR 13496, 13543 (column 3) through 13544 (column 1).

*Response 8:* EPA agrees with the commenter that its longstanding guidance to states with respect to contingency measures is that such measures should result in at least one year's worth of RFP as determined in the nonattainment plan for the area at issue. EPA also agrees that the determination of what is necessary for RFP should be based upon the overall emission reductions necessary for attainment of the relevant NAAQS in the area, not based on the premise that some lesser amount of emissions reduction from an individual source in a nonattainment area is sufficient for this purpose. This is especially the case for attainment of the $PM_{2.5}$ or Ozone NAAQS, where violations of the NAAQS in a given area are commonly the result of aggregate emissions from numerous sources located across the designated nonattainment area. Similarly, EPA agrees that for purposes of supporting a conditional approval of an element of a nonattainment plan under section 110(k)(4), the commitment submitted by a state should be to adopt and submit additional specific measures that would correctly address the deficiency in the original SIP submission that is the reason for the conditional approval. In this instance, the conditional approval pertains to ACHD's commitment to submit adequate contingency measures, consistent with the requirements of section 172(c)(9) and with EPA guidance for those requirements.

EPA disagrees that the ACHD commitment letter is insufficient to support conditional approval of the contingency measures element of the Allegheny County $PM_{2.5}$ Plan. In its April 7, 2020 commitment letter, ACHD committed to adopt specific contingency measures that would achieve 34 tons per year for the Area, or 9.4 tons per year of reductions nearby the Liberty Monitor. The Agency's June 12, 2020 proposed approval of ACHD's SIP revision proposed conditional approval of the contingency measure element of the plan on the basis that ACHD would adopt additional contingency measures necessary to satisfy CAA requirements applicable to contingency measures. EPA's longstanding guidance on this is that contingency measures should achieve reductions in pollutants from sources that constitute one year's worth of RFP in

the area, unless presented with facts and circumstances that justify a different amount.[53]

EPA is finalizing the conditional approval based on ACHD's commitment to adopt and submit contingency measures meeting statutory requirements and consistent with EPA guidance. In this action, EPA is not determining definitively whether such measures must achieve 34 tpy or any other specific amount of emissions. EPA is finalizing this conditional approval based on its expectation that ACHD's new contingency measures will obtain reductions at least equal to one year's worth of RFP, i.e., 34 tpy, but notes that it is neither accepting nor rejecting at this time the possibility that the state could submit contingency measures obtaining some other amount of reductions and adequately justify this other amount. When ACHD adopts and submits the specific control measures to remedy the current deficiency with respect to the contingency measure element of the plan, EPA will review and take rulemaking action to assess the necessary levels of emission reductions for ACHD's replacement contingency measures.

*Comment 9:* The commenter cites federal court decisions for the proposition that EPA lacks the authority to conditionally approve a $PM_{2.5}$ Plan that entirely lacks contingency measures, see *Sierra Club v. EPA*, 294 F.3d 155, 164 (D.C. Cir. 2002), and that EPA cannot grant conditional approval based on a state commitment letter that does not provide specific enforceable limits, see *Sierra Club v. EPA*, 356 F.3d 296 (D.C. Cir. 2004). Based on these cases, the commenter then contends that ACHD cannot simply identify specific contingency measures without establishing that they would be approvable if implemented. The commenter cites the second *Sierra Club* case for the proposition that the commitment must be "something more than a mere promise to take appropriate but unidentified measures in the future," *Sierra Club v. EPA*, 356 F.3d 296, 303, and that this "requires that the States complete the analyses necessary to identify appropriate measures before, rather than after, conditional approval is

---

[53] *See*, for example "State Implementation Plans; General Preamble for the Implementation of Title I o the Clean Air Act Amendments of 1990," 57 FR 13498 at 13543 and 13544 (April 16, 1992) and "Fine Particulate Matter National Ambient Air Quality Standards; State Implementation Plan Requirements; Final Rule," 81 FR 58010 at 58067 (August 24, 2016).

granted."[54] The commenter argues that because the Department does not quantify any putative emissions reductions from the "hypothetical" contingency measures set forth in its commitment letter, it is impossible to identify appropriate measures before conditional approval is granted, as the D.C. Circuit required.[55] Therefore, the commenter states that EPA may not grant the requested conditional approval.

*Response 9:* EPA agrees that in order to support a conditional approval under section 110(k)(4), a state must provide a written commitment to take specific actions to address the identified deficiencies in the initial SIP submission that resulted in the need for a conditional approval. As explained in the proposal document, and as evidenced by the commitment letter in the docket supporting this final action, ACHD has made an adequate commitment to support conditional approval of the contingency measures element of the Allegheny County $PM_{2.5}$ Plan. Thus, EPA does not agree that the *Sierra Club* cases cited by the commenter preclude this conditional approval.

The factual circumstances in the 2004 *Sierra Club* case are different and therefore distinguishable from the facts of ACHD's $PM_{2.5}$ Plan in several respects. First, the SIP submission at issue in the *Sierra Club* case initially included nothing addressing three required elements of that nonattainment plan: contingency measures, RACM analyses and RACM, and a post-1999 Rate of Progress (ROP) plan. *Sierra Club* at 301. The *Sierra Club* court concluded that it was inappropriate for EPA to exercise its conditional approval authority under section 110(k)(4) in a situation in which the states had submitted nothing to address these requirements. Here, ACHD did address the contingency measures requirement as an element in its initial nonattainment plan SIP submission (i.e., installation of a new underfire stack on Battery 15 and installation of a cover or air curtains on south side of B battery shed). Although EPA found that these measures did not meet the statutory requirements for contingency measures because a

---

[54] *Id.*

[55] *See* Commitment Letter of the Allegheny County Health Department, dated April 7, 2020, available in the docket for this action, Document ID EPA-R03-OAR-2020-0157-0071.

consent order required that these actions take place regardless of whether the area failed to attain or failed to meet its ROP plan, ACHD did make a good faith effort to submit contingency measures as part of the Allegheny County $PM_{2.5}$ Plan, unlike in the 2004 *Sierra Club* case cited.

Second, the commitment letters subsequently submitted by the states involved in the 2004 *Sierra Club* case were vague and failed to list any specific, enforceable measures that the state would adopt as contingency measures. Citing one state's commitment letter, the Court noted that the commitment letters only promised to submit "adopted contingency measures to be implemented if the D.C. Area does not attain the one-hour ozone NAAQS by November 15, 2005." *Id*. at 302. Here, ACHD has identified seven specific contingency measures it will adopt to obtain an additional 34 tons per year of direct $PM_{2.5}$ emission reductions (or of $PM_{2.5}$ precursors) or 9.4 tpy in the vicinity of the Liberty Monitor. ACHD has committed to adopt contingency measures that will meet EPA's requirements for contingency measures (i.e., adopted measures that equate to one year's worth of RFP reductions, along with the requisite description of triggering mechanisms for these measures) and will submit the contingency measures to EPA within one year from EPA's final conditional approval. EPA notes that it is basing this approval on the ACHD commitment to obtain the 34 tpy that would constitute the one year's worth of RFP that is consistent with EPA guidance for the contingency measures requirement, not the 9.4 tpy alternative posited by ACHD. The *Sierra Club* court found that "[t]he statute requires that the States commit to adopt specific enforceable measures," *Sierra Club* at 302, but that EPA was accepting as sufficient a commitment to adopt what it conceded are unspecified measures.[56] The measures identified by ACHD are much more specific than those identified in that case, and are made more specific by the promise to adopt some combination of these measures to achieve the necessary amount of reductions needed in the area.

Third, the *Sierra Club* decision language cited by the commenter as requiring state analyses prior to EPA granting conditional approval can also be distinguished from the

---

[56] *Id.*

circumstances in this SIP submission. The 2004 *Sierra Club* court was expounding upon its earlier decision in the Natural Resources Defense Council *(NRDC) v. EPA*, 22 F. 3d 1125 (D.C. Cir. 1994). In the *NRDC* case, the Court was reviewing EPA's interpretation of newly created conditional approval language in section 110(k)(4) that Congress adopted in the 1990 CAA amendments. Through guidance and rulemaking, EPA had interpreted section 110(k)(4) as allowing conditional approval of a "committal SIP" containing no substantive provisions, so long as the state submitted it within one of the deadlines and the state promised to adopt specific enforceable measures within a year and a schedule of interim milestones in the future adoption process. The *NRDC* court concluded that "the conditional approval mechanism was intended to provide the EPA with an alternative to disapproving substantive, but not entirely satisfactory, SIPs submitted by the statutory deadlines and not, as the EPA has used it, a means of circumventing those deadlines." *NRDC* at 1134-1135. The court then held that "section 110(k)(4) does not authorize the EPA to use committal SIPs to postpone SIP deadlines." *Id.* at 1135. That situation is not present here. Although ACHD submitted its nonattainment plan SIP submission late, ACHD did submit a complete nonattainment plan containing all the required elements -- including the contingency measures element. Upon further evaluation of the SIP submission, EPA determined that the contingency measures were not approvable, and therefore based on ACHD's commitment has elected to exercise its authority to provide ACHD up to one year to remedy the deficiency, in accordance with section 110(k)(4). Thus, EPA is not circumventing the original SIP submission deadline by granting conditional approval in this matter, but merely allowing ACHD to revise these "substantive, but not entirely satisfactory, elements of the SIP." See *Id*. at 1134-1135. EPA is thus using its discretionary authority under section 110(k)(4) in an appropriate way.

Regarding the Clean Air Council's claim that ACHD had to do further analyses of the contingency measures before EPA could grant conditional approval, EPA has concluded that ACHD has done such an analysis by identifying readily available emission control contingency

measures which, if triggered, will achieve the necessary emission reductions in the nonattainment area. The submitted emission reduction numbers come from the analysis contained in the attainment demonstration and all the elements that make up the demonstration, such as emission inventories and modeling. The 34.1 tpy number is one year of emission reductions derived from ACHD's Reasonable Further Progress (RFP) plan, which was informed by the modeling. Having completed this analysis, ACHD then had to analyze where it could obtain emission reductions equal to this amount, and that analysis resulted in the list of seven specific contingency measures set forth in the ACHD commitment letter, which ACHD will evaluate, adopt, and then submit to EPA for approval as contingency measures to meet the requirement of the conditional approval.

The commenter also claims that this language from the *Sierra Club* decision requires, under these circumstances, that the SIP submission include analyses identifying both the specific contingency measures and the specific amount of emission reduction obtained from each measure before EPA can grant conditional approval. EPA disagrees with this reading of the court's ruling. The 2004 *Sierra Club* court did not specifically identify what "analyses" must be done by the state as part of the conditional approval. In the *Sierra Club* case, the three missing statutory elements of the attainment plan were contingency measures, RACM analyses, and Rate of Progress plans. The court did not address the issue of what specific analyses the state needed to perform as part of the submittal of the contingency measures, because there were no contingency measures identified or included in the SIP. In the absence of specific contingency measures in that SIP, the court would only be hypothesizing about what analysis needed to accompany specific contingency measures.

The Clean Air Council's argument that ACHD must quantify the specific amount of emission reductions available from each specified contingency measure (prior to EPA granting conditional approval) is also not supported by the *Sierra Club* case. In the 2004 *Sierra Club* matter, the states did not submit anything to meet the three required elements of the attainment

plan, including the contingency measures, so the court had no reason to opine on what specific analysis should accompany three entirely missing elements of the attainment plan. EPA does not agree that the decision requires ACHD to identify specific amounts of emission reductions from these specific proposed measures prior to conditional approval, as EPA expects that the state will provide additional information supporting the calculation of estimated emission reductions for all adopted contingency measures as part of a future SIP revision to address EPA's final conditional approval of the contingency measure element of the plan. ACHD has committed to adopt sufficient measures from the identified list of potential control measures sufficient to achieve the necessary one year's worth of RFP for this area.

EPA does not agree that ACHD must precisely calculate how much emission reduction will be achieved by the individual measures until ACHD actually submits the adopted measures to EPA for evaluation and approval into the SIP, as appropriate at that time. For these reasons, EPA does not agree with the commenter's claim that case law prohibits EPA from granting conditional approval for the contingency measures under the circumstances of this SIP submission, and also disagrees that ACHD's commitment to adopt contingency measures must, at this time, contain specific amounts of emissions attributable to individual measures.

## IV. Final Action

### *A. Approval of the Attainment Plan and Related Elements*

Under CAA section 110(k)(3), EPA is approving Pennsylvania's SIP revisions to address the CAA's Moderate area planning requirements for the 2012 $PM_{2.5}$ NAAQS in the Allegheny County nonattainment area—with the exception of the contingency measures element of the plan, which EPA is conditionally approving. Specifically, EPA is proposing to approve the following elements of the Allegheny County $PM_{2.5}$ plan: the 2011 base year emissions inventory as meeting the requirements of CAA section 172(c)(3); the RACM/RACT demonstration as meeting the requirements of CAA sections 172(c)(1) and 189(a)(1)(C); the attainment demonstration as meeting the requirements of CAA sections 172(c)(1) and 189(a)(1)(B);

the RFP demonstration as meeting the requirements of CAA section 172(c)(2); the QM demonstration as meeting the requirements of CAA section 189(c); and the MVEB for 2021, which meets the transportation conformity related requirements of CAA section 176(c) and 40 CFR part 93, subpart A.

EPA is approving the 2021 MVEB element of the Plan in this final action. EPA has determined that ACHD has remedied the deficiency with the 2021 MVEB, for which EPA proposed conditional approval in our June 12, 2020 proposed action. Pennsylvania, in an April 20, 2020 letter to EPA, committed to finalize adoption of its intended 2021 MVEB, which had not yet been finally adopted or undergone public participation at the local level. EPA's proposed to conditionally approve the MVEB element of the Allegheny County $PM_{2.5}$ Plan, contingent upon final adoption by ACHD of the intended 2021 MVEB. On October 2, 2020, PADEP submitted a SIP revision (on behalf of ACHD) that contained the final 2021 MVEB for the Allegheny County Area, remedying EPA's June 12, 2020 proposed condition upon approval of the MVEB element of the Plan. This final 2021 MVEB was unchanged from the intended MVEB upon which EPA proposed conditional approval in our June 12, 2020 proposed action.[57] EPA has determined that this final 2021 MVEB remedies the deficiency underlying our conditional approval of the MVEB element of the plan, as the final MVEB was adopted (as proposed), satisfies public participation requirements of EPA's conformity rule under 40 CFR 93.118(e), and has been formally submitted to EPA as a supplemental SIP revision. The final 2021 MVEB for the 2012 $PM_{2.5}$ NAAQS, including direct $PM_{2.5}$ and the precursor $NO_x$, is listed in Table 1,

**Table 1 - Allegheny County, PA 2012 $PM_{2.5}$ NAAQS Attainment Year MVEB for Direct $PM_{2.5}$ and NOx**

| Motor Vehicle Emissions Budget Year | Direct $PM_{2.5}$ On-Road Emissions (tons per year) | $NO_x$ On-Road Emissions (tons per year) |
|---|---|---|
| 2021 | 266 | 5,708 |

[57] *See* 85 FR 35872, 35873 (June 12, 2020).

*B. Conditional Approval of the Contingency Measures Portion of the Attainment Plan*

EPA is conditionally approving the contingency measures element of the Allegheny County Plan. In accordance with section 172(c)(9) of the CAA and EPA's $PM_{2.5}$ Implementation Rule, the attainment demonstration for a moderate $PM_{2.5}$ nonattainment area must include contingency measures.[58] Contingency measures are additional control measures to be implemented in the event that the area fails to meet RFP requirements, fails to submit or meet quantitative milestones (QM), or EPA determines that the area fails to attain by the attainment date.

In order for contingency measures to be approved as part of a state's $PM_{2.5}$ moderate area attainment plan, the measures must meet the following requirements set forth in the $PM_{2.5}$ Implementation Rule and 40 CFR 51.1014: (1) The contingency measures must be fully adopted rules or control measures that are ready to be implemented quickly upon a determination by the EPA Administrator of the nonattainment area's failure to meet RFP, failure to meet any QM, failure to submit a QM report or failure to attain the standard by the attainment date; (2) the plan must contain trigger mechanisms for the contingency measures, specify a schedule for implementation, and indicate that the measures will be implemented with minimal further action by the state or by EPA; (3) the contingency measures shall consist of control measures not otherwise included in the control strategy for the area; and (4) the contingency measures should provide for emissions reductions approximately equivalent to one year's worth of reductions needed for RFP. PADEP submitted a letter to EPA dated April 20, 2020 conveying ACHD's commitment to adopt specific contingency measures, from a list specified in that letter, that will provide for a reduction of one year's worth of reasonable further progress towards attainment, or equivalent (up to 34 tons per year of direct $PM_{2.5}$ emissions). Further detail on ACHD's commitment and a description of the specific measures is detailed in EPA's June 12, 2020 proposed rulemaking for this action.

---

[58] *See* 40 CFR 51.1014 and 81 FR 58010, p. 58066 (August 24, 2016).

After ACHD adopts contingency measures, in compliance with related requirements under CAA section 172(c)(9) and the $PM_{2.5}$ Implementation Rule (specifically the requirements of 40 CFR 51.1003 and 40 CFR 51.1014), PADEP will submit a SIP revision containing the adopted contingency measures, along with a description of the trigger mechanisms and schedules for implementation of the contingency measures. ACHD and PADEP have committed to submit the contingency measures SIP revision to EPA within one year after EPA's conditional approval.

If EPA makes a determination that Pennsylvania has satisfied the approval condition, EPA shall take action to remove the condition on its approval of the contingency measure element of the Allegheny County $PM_{2.5}$ Plan, converting our action to full approval. Should Pennsylvania fail to remedy the condition within the one-year deadline for doing so, this conditional approval shall automatically convert to a disapproval and EPA will issue a finding of disapproval. A finding of disapproval would start an 18-month clock to apply sanctions under CAA section 179(b) and a two-year clock for a Federal implementation plan under CAA section 110(c)(1).

## V. Statutory and Executive Order Reviews

### *A. General Requirements*

Under the CAA, the Administrator is required to approve a SIP submission that complies with the provisions of the CAA and applicable Federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, EPA's role is to approve state choices, provided that they meet the criteria of the CAA. Accordingly, this action merely approves state law as meeting Federal requirements and does not impose additional requirements beyond those imposed by state law. For that reason, this action:

- Is not a "significant regulatory action" subject to review by the Office of Management and Budget under Executive Orders 12866 (58 FR 51735, October 4, 1993) and 13563 (76 FR 3821, January 21, 2011);

- Does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*);
- Is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq*.);
- Does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Public Law 104-4);
- Does not have Federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- Is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- Is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);
- Is not subject to requirements of section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the CAA; and
- Does not provide EPA with the discretionary authority to address, as appropriate, disproportionate human health or environmental effects, using practicable and legally permissible methods, under Executive Order 12898 (59 FR 7629, February 16, 1994).

In addition, this rule does not have tribal implications as specified by Executive Order 13175 (65 FR 67249, November 9, 2000), because the SIP is not approved to apply in Indian country located in the State, and EPA notes that it will not impose substantial direct costs on tribal governments or preempt tribal law.

*B. Submission to Congress and the Comptroller General*

The Congressional Review Act, 5 U.S.C. 801 *et seq*., as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take

effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. EPA will submit a report containing this action and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the **Federal Register**. A major rule cannot take effect until 60 days after it is published in the **Federal Register**. This action is not a "major rule" as defined by 5 U.S.C. 804(2).

*C. Petitions for Judicial Review*

Under section 307(b)(1) of the CAA, petitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by **[insert date 60 days after date of publication in the Federal Register]**. Filing a petition for reconsideration by the Administrator of this final rule does not affect the finality of this action for the purposes of judicial review nor does it extend the time within which a petition for judicial review may be filed, and shall not postpone the effectiveness of such rule or action. This action to approve SIP revisions consisting of the Allegheny County $PM_{2.5}$ Plan may not be challenged later in proceedings to enforce its requirements. (See section 307(b)(2)).

**List of Subjects in 40 CFR Part 52**

Environmental protection, Air pollution control, Incorporation by reference, Intergovernmental relations, Nitrogen dioxide, Particulate matter, Reporting and recordkeeping requirements, Sulfur oxides, Volatile organic compounds.

Dated: April 30, 2021

Diana Esher
Acting Regional Administrator,
Region III.

For the reasons stated in the preamble, the EPA amends 40 CFR part 52 as follows:

**PART 52—APPROVAL AND PROMULGATION OF IMPLEMENTATION PLANS**

1. The authority citation for part 52 continues to read as follows:

**Authority:** 42 U.S.C. 7401 *et seq*.

**Subpart NN—Pennsylvania**

2. In § 52.2020, the table in paragraph (e)(1) is amended by adding the entry "2012 $PM_{2.5}$ NAAQS Attainment Demonstration (including 2011 Base Year Emissions Inventory, Particulate Matter Precursor Contribution Demonstration, Reasonable Further Progress Demonstration, Demonstration of Interim Quantitative Milestones to Ensure Timely Attainment. and Motor Vehicle Emission Budgets for 2021) (excluding Section 8, Contingency Measures)" at the end of the table to read as follows:

**§ 52.2020 Identification of plan.**

* * * * *

(e)***

(1) ***

| **Name of non-regulatory SIP revision** | **Applicable geographic area** | **State submittal date** | **EPA approval date** | **Additional explanation** |
|---|---|---|---|---|
| * * * * * * * | | | | |
| 2012 $PM_{2.5}$ NAAQS Attainment Demonstration (including 2011 Base Year Emissions Inventory, Particulate Matter Precursor Contribution Demonstration, Reasonable Further Progress Demonstration, Demonstration of Interim Quantitative Milestones to Ensure Timely Attainment. | Allegheny County | 09/30/19 10/02/20 | **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER], [INSERT FEDERAL REGISTER CITATION]** | Contingency Measures (Section 9) portion of the plan is Conditionally Approved, until **[INSERT DATE ONE YEAR AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].** See 40 CFR 52.2023(n). |

| Name of non-regulatory SIP revision | Applicable geographic area | State submittal date | EPA approval date | Additional explanation |
|---|---|---|---|---|
| and Motor Vehicle Emission Budgets for 2021) (excluding Section 8, Contingency Measures) | | | | |
| * * * * * * * | | | | |

* * * * *

3. Section 52.2023 is amended by adding paragraph (n) to read as follows:

**§ 52.2023 Approval status.**

* * * * *

(n) EPA conditionally approves the Contingency Measures element (Section 8) of the Attainment Plan (dated September 12, 2019) for the Allegheny County Area for the 2012 $PM_{2.5}$ NAAQS, as submitted to EPA as a SIP revision by Pennsylvania on September 30, 2019. Pennsylvania shall submit a SIP revision within one year of EPA's final conditional approval to remedy this condition, which satisfies all related requirements for contingency measures under CAA section 172(c)(9) and the $PM_{2.5}$ Implementation Rule (specifically, 40 CFR 51.1003 and 40 CFR 51.1014). Pursuant to CAA section 110(k)(4), this conditional approval is based upon April 20, 2020 and April 7, 2020 letters from Pennsylvania and Allegheny County committing to submit a SIP to EPA to remedy the deficiencies of this conditional approval within 12 months of EPA's conditional approval action.

[FR Doc. 2021-09565 Filed: 5/13/2021 8:45 am; Publication Date: 5/14/2021]